Water Power

INDEX TO VOLUME FIFTEEN

January to December 1963

INDEX

*Denotes an illustrated article
†Denotes an abstract from a foreign publication
§Denotes an editorial note

A

Abiquiu Dam, Wheel Excavator at—Mackintosh *510
Africa—
Cambambe in Service ... *128
Electric Power Conference, African ... ... §272
Ethiopia, Flicker-Compensation Equipment for ... §315
Kabale Hydroelectric Scheme, Uganda ... ... §91
Kainji Dam, Nigeria, Preliminary Contract ... ... §358
Kainji Dam, Nigeria, to be Built ... ... §4, §48
Kariba Costs Less than Expected ... ... §3
Kariba Lake is Full ... ... §228
Kariba Weed, Air Offensive Against ... ... §91
Katanga, Power in ... ... §272
Kunene River Scheme ... §445
Lusitu River Project, Southern Rhodesia ... ... §4
Okavango Scheme Recommended, South Africa ... §91
Orange River Consultants ... §272
Orange River, Consulting Engineer to be Chosen ... §136
Orange River Plans ... ... §47
Orange River, Work Begins on ... ... §444
Rhodesia, Electricity in ... §136
Rhodesian Farm, Hydro Scheme on ... ... §227
Sennar-Burri Project, Sudan §90
Sennar Power Station Inaugurated, Sudan ... ... §4
South African Power Investigations ... ... §315
South-West African Developments ... ... †528
Swaziland, Generators for ... §3
Swaziland, Loan for Edwaleni Scheme ... ... §314
Tema, Aluminium Smelter for (Volta River) ... ... §135
Uganda Electricity Board Report ... ... §356
Uganda, Maziba Gorge Station, River Nyakizumba, Generating Set for ... ... §358
Volta Dam Ahead of Schedule ... ... §400
Volta River, Keeping Akosombo Dam Dry ... †485
Aggregate *see* Concrete
Airborne Power Line Inspection §226
Airborne Profile Recorder, Hunting *173
Alternators *see* Generators *under* Electrical Apparatus
Aluminium—
Aluminium Plant, New Norsk Hydro ... ... §490
Manapouri, New Zealand Government to Develop ... §135
Tema, Aluminium Smelter for (Volta River) ... ... §135
America, United States of, *see* United States of America
American Iron and Steel Institute Award ... ... §183
Argentina, El Chocon Hydroelectric Scheme ... ... §359
Armfield Open Day *482
Association of Consulting Engineers 382
Aswan Cofferdam ... ... †177
Australia—
Barron River Scheme Well Advanced ... ... §180
Cloud Seeding in Australia ... †43
Conference, First Australasian, on Hydraulics and Fluid Mechanics—Silvester 100
Great Lake Power Development, Tasmania—Colebatch, Paxton and Endersbee *317
Meadowbanks Dam Grouting Contract, Tasmania ... §488
Snowy Mountains, Blowering Dam to be Completed ... §400
Snowy Mountains, Khancoban Dam Contract ... ... §402
Snowy Mountains, Murray 1, Remaining Sets Ordered ... §490
Snowy Mountains, Murray 2, Generating Sets, Tenders for §180
Snowy Mountains Report ... §2
Snowy Mountains, Surface or Underground Power Stations †352
Snowy Mountains, Switchgear for ... ... §271
Tasmania, Mersey-Forth Power Development 242
Tasmania, Turbines for Lower Derwent ... ... §226
Tasmanian Submarine Cable Proposed ... ... §90
Tidal Power in Western Australia ... ... §3
Victoria Annual Report ... §91
Water Resources Symposium §445
Austria—
Aschach Station Inaugurated §489
Austrian Power in 1962 ... §357
Oetz Valley Development ... †221
Scharding-Neuhaus Power Station ... ... †440

B

Benmore *see* New Zealand
Brazil—
Brazilian Traction, Light and Power Report ... ... §315
Cachoeira Dourada Project ... †485
Hydroelectric Investigations in Brazil ... ... †176
Hydroelectric Survey, Brazilian §90
Jacui Power Plant *93
Juquia Development ... ... †312
Minas Gerais Power Study ... 17
Ponte Coberto Station Completed ... ... §271
Swiss Turbines for Brazilian Stations ... ... §400
British Columbia *see* Canada
British Contract for Spain ... §90
British Hydromechanics Research Association *see* Research
Bulb Sets *see* Turbines
Bulldozers *see* Construction Equipment
Butterfly Valves *see* Gates and Valves

C

Cables, Electrical *see* Electrical Apparatus
Cambambe in Service *128
Cameron Highlands Inauguration ... ... §357
Canada—
Arrow Lakes Dam Model ... §47
Athabasca River Studies ... §46
Beechwood Generating Station †177
BC Electric Take-Over Invalid §356
BC Hydro and Power Authority's First Annual Report §356
British Columbia, Portage Mountain Dam Contract §91, §228, §271
British Columbia, Portage Mountain Diversion Tunnels, Peace River ... ... §4
British Columbia Power Affairs §446
Canadian Power in 1962 ... 164
Columbia, Last Hurdle on the? 355
Grand Rapids Generating Station ... ... †222
Hamilton Falls, US Interest in §227
Hydro Quebec Report ... §401
Kemano Tunnel, Repairing the ... ... †42
Manicouagan No. 2 Generators ... ... §358
Mica Creek Dam Model ... §316
New Brunswick, Electricity in §490
Northern Canada Power Commission ... ... §47
Quebec, Electricity Nationalisation in ... ... §2
Rana Pratrap Sagar Development, Canadian Electrical Plant for ... ... §446
Run-Off Data, Annual ... 108
South Saskatchewan River Project—Mackintosh *361, *403
Twin Falls Scheme, Labrador *8
Canals *see* Channels
Capacitors *see* Electrical Apparatus
Cavitation Tests on Scale Models †88
Cement *see* Concrete
Channels—
Check Surveys of Supply Systems ... ... †267
Critical-Flow Computations, Method of Hydraulic Equivalents for—Rajaratnam ... *79
Friction Loss in Steep Channels—Rajaratnam 7
Linings, Canal ... ... †131
Rating Curves for Venturi Flumes with Exponential Throats—Diskin *333
Chile, Pullinque Power Station *27
Circuit Breakers *see* Electrical Apparatus
Civil Engineering Research Council 191
Cofferdams *see* Dams
Colombia—
Cauca Valley Power Loan ... §271
Developments in Colombia ... §226
German Turbines for El Colegio Station ... ... §182
Miraflores Dam Site *439
Sequile Dam ... ... †312
Combined Hydro and Thermal Development *see* Electricity Supply Systems
Compressors *see* Drilling and Blasting
Computers, Conservatism and ... 45
Concrete—
Allegheny Dam's Vacuum Aggregate Cooling System ... †268
Cement Additive, Polish ... 349
Grout, Chemical, CEM-XA ... 309
Grout, Pumping to Site ... †352
Shrinkage Cracking in Concrete 174
see also Dams *and* Tunnels
Conduits, Closed *see* Penstocks, Pipes and Pressure Shafts *and* Tunnels
Conduits, Open *see* Channels

DEC 2 1969

Conferences—
African Electric Power Conference ... ... §272
Arch-Dam Theory Symposium, Southampton §356, §444
Australasian Conference, First on Hydraulics and Fluid Mechanics—Silvester ... 100
British Electrical Power Convention, Water-Power Research at 347
Concrete Dam Models, Lisbon Symposium on 37
EEC Peak-Load Symposium, Venice ... 432, 467, 516
IAHR Future Programme ... §444
IAHR Tenth International Congress, London §400, §490
IEC Hydraulic Turbine Committee 383
Indian Institute of Science Symposium on Hydraulics and Hydraulic Machines—Seetharamaiah 392
International Society of Rock Mechanics, Salzburg Colloquium ... ... §180, 501
Large Dams, Eighth Congress on ... ... §3
Rock Tests, In-Situ, Swansea Colloquium on *155
Société Hydrotechnique de France, Eighth Congress ... §181
State of Stress in the Earth's Crust, Santa Monica Conference—Veltrop ... 369, 446
Stress Analysis Conference, Swansea ... ... §489
Turbomachines, VDI Conference on ... ... §134
Water Resources Symposium, Australian ... ... §445
World Power Conference Council ... ... §357
World Power Conference, Lausanne Sectional Meeting §182
World Power Conference, Sixth, Melbourne ... 32, 62
Conowingo's Second-Stage Development—McCormack and Moyers *66
Construction Equipment—
Dump Truck, Caterpillar 35-ton *264
Fiat Angledozer at Place Moulin Dam *265
Locomotive, Small *308
Miranda Construction Equipment 282
Shovel for Small Tunnels, Landsverk L-85 ... ... *127
Truck for Heavy Equipment, Leyland *219
Wheel Excavator at Abiquiu Dam—Mackintosh ... *510
Wheel Tractor-Dozers, Caterpillar *220
see also Concrete, Drilling *and* Tunnels
Correlation of Power Resources *see* Electricity Supply Systems
Costa Rica Power Loan ... §402
Current Meter Group, International 249
Current Meters, Miniature, in Unsteady Flow, New Recording System for—Gautschi and Menzi *18
Czechoslovak Electricity Supply Industry ... ... †177

D

Dams—
Allegheny Dam's Vacuum Aggregate Cooling System †268
Arch Dam Stresses, Analysing ... ... †43
Arch-Dam Theory Symposium, Southampton §356, §444
Arrow Lakes Dam Model, Canada ... ... §47
Aswan Cofferdam ... ... †177
Big Bend Dam, Construction Progress at, ... †397
Blowering Dam to be Completed ... ... §400
Bottom Outlets in Dams, ... †353
Concrete Dam Models, Lisbon Symposium on ... 37
Congress on Large Dams, Eighth ... ... §3
Cougar Dam, USA ... ... †266
Cuga River Dam, Italy ... †354
Cupola Dams in North America, First ... ... †486
Dam Disasters ... ... §134
Derbendi Khan Dam—Blanc *423, *447
Earthfill Dams, Soil Cement for ... ... †267
Flood Waves Resulting from Dam Failures, Computing †266
Foundation Rocks, Testing †132
Grande Dixence Dam ... *150
Hollow-Block Light Gravity Dam, Behaviour of a ... †223
Kainji Dam, Nigeria, to be Built ... ... §4, §48
Kainji Dam Preliminary Contract ... ... §359
Khancoban Dam, Snowy Mountains, Contract for ... §402
Krasnoyarsk Dam Closed ... §180
Malpasset Disaster ... ... §46
Malpasset Report—Jaeger *55, 137, 138, 228
Manicouagan Dams, Hydro Quebec ... ... §401
Mauvoisin Dam ... †175, *234
Meadowbanks Dam Grouting Contract, Tasmania, Australia ... ... §488
Mica Creek Dam Model ... §316
Miraflores Dam Site, Columbia *439
Miranda Dam *277
Montevnard Dam, France ... †86
Nant-y-Moch Dam, Rheidol Scheme, Wales *491
Obra Dam, India ... ... †131
Observation of Dams ... †175
Orrin Dam, Ross-shire ... 286
Place Moulin Dam *265
Plastic Sheeting, Repairing an Earth and Rockfill Dam with ... ... †352
Plastics, Ibeland Dam, Norway, Lined With ... ... §489
Pore Pressure in Earth Dams †397
Porous Solid, Interstitial Pressure in a ... ... †132
Portage Mountain Dam Tenders ... ... §91, §228
Portage Mountain Diversion Tunnels, Peace River ... §4
Repairing Concrete Dams with Sprayed-On Plastic Coating ... ... †398
Sakamoto Dam ... ... †44
Scour Protection Below Overflow Dams ... ... †43
Sequile Dam, Colombia ... †312
Spillway-Apron Elevations, A Two-Parameter Method for Determining—Advani ... *503
Spillway, Flow at the Toe of a ... ... †310, †354
Spillway Piers, Photoelasticity Test Applied to ... ... †86
Spillway Research, Overflow †268
Spillway, Shaft, Design of †266
Stress Analysis Conference, Swansea ... ... §489
Stress Analysis of Hydraulic Structures Including Pore-Pressure Effects—Zienkiewicz *104
Stwlan and Tan-y-Grisau Dams, Ffestiniog ... *187, *254
Superelevation 225
Tagokura Dam *49
Taveras Dam to Proceed ... §48
Vaiont Disaster, Italy §446, 487
Volta Dam Ahead of Schedule ... ... §400
Watershed Models, Designing Dams with the help of ... †442
see also Concrete *and* Hydrology, Regulation and Storage
Datofonic Supervisory Systems *81
Dataplotter for ASEA *129
Derbendi Khan Project—Blanc *423, *447
Development of Resources *see* Resources and Development
Dez Project ... ... †353
Direct Current Transmission *see* Electrical Apparatus
Dissipators *see* Gates and Valves
Dominican Republic—
Power Developments, Dominican ... ... §401
Taveras and Valdesia Power Agreement ... ... §181
Taveras Dam to Proceed ... §48
Drilling
Aswan, Compressors and Drills for ... ... §272
Compressor, CP.900-RO-2 Power Vane *83
Drill, Holman "Silver 82" ... *129
Trac-Rig Mobile Drill, Atlas Copco *349
Voler Compound for Drill Threads 526
Wagon Drill, Utility, Holman *39
Dumpers *see* Construction Equipment
Dutch Delta Plan ... ... †397

E

Earthmoving Equipment *see* Construction Equipment
Ecuador Electrification Study for ... ... §316
Egypt, Aswan Cofferdam ... †177
Egypt, Aswan, Compressors and Drills for ... ... §272
El Salvador, Power Loan for §357
Electrical Apparatus—
Amplifier, DC, for Physical Measurements *526
Busbars, BICC, at Belesar, Spain 174
Cable, Cook Strait, Another? §489
Cable Roller, Splitz *526
Cable, Submarine, Kattegatt §227
Cable, Submarine, Proposed for Tasmania ... ... §90
Cables, 275kV Oil-Filled, for Cruachan ... ... §315
Capacitors for Sardinia Link §488
Circuit Breaker, Low-Oil Content, Testing ... ... †530
Circuit Breakers, 735kV, French, for Canada ... §359
Flicker-Compensation Equipment for Ethiopia ... ... §315
Generator, Dinas, Rheidol Scheme, Wales *500
Generator/Motors for Hudson Pumped-Storage Scheme §445
Generator Thrust Bearings, Operating Conditions of ... †441
Generators, British, for India §402
Generators for Manicouagan No. 2 ... ... §358
Generators for Swaziland ... §3
Generators, Snowy Mountains, Murray 1, Remaining Sets Ordered ... ... §490
Generators, Tagokura ... *113
Generators, Waterwheel, Swedish Orders ... ... §90
Jacui Station, Brazil, Electrical Equipment in *96
Miranda Alternators and Electrical Equipment ...*341
Rana Pratrap Sagar Development, Canadian Electrical Plant for ... ... §446

DEC 2 1969
LINDA HALL LIBRARY
KANSAS CITY MO.

Switchgear for Snowy Mountains ... ... §271
Transformer Insulation, High-Voltage ... ... §135
Transmission—Getting the Power away 399
Transmission Line, EHV DC, USA to Test ... ... †88
Transmission Line Inspection, Airborne ... ... §226
Transmission Line, Yanhee, Thailand, Loan for ... §227
Transmission Lines, Reinforced Aluminium Conductor for *349
Transmission System, 750kV, Manicouagan-Outardes ... §401
Electrical Discharges Used to Consolidate Sandy Ground ... †440
Electricity Supply Systems—
Austrian Power in 1962 ... §357
Canadian Power in 1962 ... 164
Europe, Electrical Energy Statistics in 103
Ffestiniog Pumped-Storage Station, Operation of ... *256
Hidouro Annual Report ... §357
Hydro Quebec Report ... §401
Irish Power in 1962/63 ... §400
New Brunswick, Canada, Electricity in ... ... §499
Katanga, Power in ... ... §272
New Zealand's Power Systems, Interconnecting ... †529
Peak-Load Symposium, EEC, Venice ... 432, 467, 516
Portugal, Electricity in 1962 §401
Portugal, Progress on the Cávado ... ... §226
Regional Inter-Ties and National Supergrids—Sewell *211, *258, *287
Rhodesia, Electricity in ... §136
Seven-Country Power Link-Up ... ... §48
Steam-Hydro Power Partnership ... ... †353
Supervisory Systems, Datofonic *81
Swedish Power in 1961/2 ... §314
Uganda Electricity Board Report ... ... §356
Value of Scottish Water Power ... ... §134
Value of Water Power in a Mixed System—Chapman *165
see also Hydrology Regulation and Storage; Pumps, Pump Turbines and Pumped-Storage; Tidal Power *and* Resources and Development
England, Southern, Hydro-electricity in ... ... †396
Ethiopia *see* Africa
Euphrates Dam ... ... §135
Europe, Electrical Energy Statistics in 103
Europe, Power Plant in ... §228
Excavators *see* Construction Equipment

F

Ffestiniog *see* Wales
Fish Pass, Borland, for Russia §445
Fish Pass, Saratov ... ... †528
Floods *see* Dams
Flow *see* Channels, Dams, Hydraulics, Intakes, Research *and* Turbines
Flow Gauging, Applying Radio-Isotopes to †267, †354, †485
Flowmeter, Mawdsley "Emflux" *524
Fluid Mechanics *see* Hydraulics
Flume Flow, A Critical Control Section for ... ... †268
Flumes, Venturi, with Exponential Throats, Rating Curves for—Diskin *333
Forebay Sized Quickly—Low ... *109
France—
Franco-Hungarian Manufacturing Agreement ... ... §316
Hospitalet-Lanoux Pumped-Storage Scheme ... ... †267
Hospitalet Penstocks ... †398
Hydroelectric Industry Reviewed, French ... ... §271
Lower Rhône Scheme, Preliminary Studies for ... †266
Malpasset Report—Jaeger *55, 137, 138, 228
Monteynard Dam ... ... †86
Power Construction in France 431
Rance, Construction Progress on the ... ... †441
Rance Sluice Gates ... ... §315
Rhône Power and Canal Project ... ... §489
Roselend Power Tunnel, Testing the Imperviousness of †267
Turbines, Pelton, Record for France ... ... §270
Frequency Control *see* Governors *under* Turbines

G

Gando Power Project—Sato ... *385
Gas Turbines versus Pumped Storage ... ... 521, †530
Gates and Valves—
Gear Units, Standard, for Valves, Rotork *40
Grande Dixence Butterfly Valves and Dissipators ... *201
Rance Sluice Gates ... ... §315
Sluice Gates—Bleuler ... *460
Trends in Gate Design ... †222
Valve Tester, Rapid, Madan *220
Generators *see* Electrical Apparatus
Geology—
Derbendi Khan Dam Foundations—Blanc *424
Foundation Rocks, Dam, Testing ... ... †132
Granite—Richey *237, *303, *326, *374, *409, *475, *505
Germany, Pumped-Storage Planning in—Lottes *21
Ghana *see* Volta River *under* Africa
Glacier Water at its Source, Diverting ... ... †268
Governors *see* Turbines
Grande Dixence ... *145, *201
Granite—Richey *237, *303, *326, *374, *409, *475, *505
Great Lake Power Development, Tasmania—Colebatch, Paxton and Endersbee ... *317
Greece, Vodas River Development ... ... †398
Grouting 443
Grouting, Vianden Pressure Shaft—Ullmann ... 92, 230

H

Hamilton Falls, US Interest in §227
Hungary—
Franco-Hungarian Manufacturing Agreement ... §316
Tiszalök Power Station ... †440
Yugoslavia and Hungary Power Cooperation ... §228
Hydraulic Engineering, Seventh International Course in ... §182
Hydraulic Structures, Stress Analysis of, Including Pore-Pressure Effects—Zienkiewicz *104
Hydraulics—
Backwater Curves, Calculating ... ... †42
Energy Conversion of a Free-Falling Circular Jet in a Water Cushion ... ... †311
Flow Measurement by Radioactive Isotopes ... ... †132
Flow Studies ... ... †44
Flume Flow, A Critical Control Section for ... ... †268
Hydrostatic Thrust on Plane Surfaces, New Approach to—Jones *284
Radio-Isotopes, Flow Gauging by Means of ... ... †267
Spillway-Apron Elevations, A Two-Parameter Method for Determining—Advani ... *503
Turbulent Flows with Stationary Boundary Conditions ... ... †442
see also Channels: Conferences; Dams; Intakes; Penstocks, Pipes and Pressure Shafts; Research *and* Turbines
Hydraulics Research Station Open Day ... ... §357
Hydro and Other Power Resources, Correlation of, *see* Electricity Supply Systems
Hydroelectric Power Stations *see* Power Stations
Hydroelectric Resources *see* Electricity Supply Systems *and* Resources and Development
Hydrology, Regulation and Storage—
Canadian Annual Run-Off Data 108
Cloud Seeding in Australia †43
Derbendi Khan Hydrology—Blanc 426
Hydrological Studies on Experimental Watersheds, Analytical ... ... †175
Peak-Load Operation of Run-of River Plants—Starosolszky and Laczkó *139, *192
Radio-Isotopes Aid Spring Run-Off Forecasts from Snowfields *308
Silting in Reservoirs ... ... †130
Wanapum Reservoir Impounded in 48 Hours ... †440
Weed, Kariba, Air Offensive Against ... ... §91
see also Dams *and* Pumps, Pump - Turbines and Pumped Storage
Hydrostatic Thrust on Plane Surfaces, New Approach to—Jones *284

I

India—
British Generators for India §402
Indian Institute of Science Symposium on Hydraulics and Hydraulic Machines—Seetharamaiah 392
Kerala Development, Contract for ... ... §91
Koyna Development ... †396
Nagarjuna Sagar Project ... †396
Obra Dam, Blueprint for ... †131
Rana Pratrap Sagar, Development, Canadian Electrical Plant for ... ... §446
Rihand Project ... ... †176
Swedish Contractors for Ghambal River Tunnel ... §315
Yamuna Scheme II, Tenders invited for ... ... §182
Intakes—
Flow Conditions at Low-Head Power Intakes ... †223
Grande Dixence Intake Works *201
Hydraulic Design of Streambed Intake Screens ... †396
Integration of Power Resources *see* Electricity Supply Systems
International Association of Hydraulic Research *see* Conferences *and* Research
International Bank for Reconstruction and Development *see* World Bank
International Commission on Large Dams *see* Conferences

International Current Meter Group 249
International Power Exchanges *see* Resources and Development
International Society of Rock Mechanics, Salzburg Colloquium ... ... §180, 501
Iran, Dez Project ... ... †353
Iraq, Derbendi Khan Project—Blanc *423, *447
Irish Power in 1962/63 ... §400
Iron Gates Scheme to Proceed §314
Italy—
Cuga River Dam ... ... †354
Jacui Power Plant, Brazil, Italian Engineers Build ... *93
Moncenisio, World's Most Powerful Turbines Ordered for ... ... §47
Place Moulin Dam *265
Sardinia Link, Capacitors for §488
Vaccarizzo Power Station ... †88
Vaiont Disaster ... ... §446

J

Jacui Power Plant *93
Japan—
Gando Power Project—Sato *385
Hatanagi Project ... ... †88
Sakamoto Dam ... ... †44
Tagokura Power Station *49, *110

K

Kariba *see* Africa
Kattegatt Submarine Power Cable ... ... §227
Kimano-Kitimat *see* Canada

L

Laboratories *see* Research
Labrador *see* Canada
Loaders *see* Construction Equipment
Locomotive, Small *308

M

Malaya—
Batang Padang, Plant Tenders Called ... ... §488
Cameron Highlands Inauguration ... ... §357
Power Loan to Malaya ... 456
Malpasset Disaster ... ... §46
Malpasset Report—Jaeger *55, 137, 138, 228
Manapouri *see* New Zealand
Mangla *see* Pakistan
Mauvoisin *231, *295
Mekong, Mathematical Model of the ... ... §90
Mekong River Survey ... ... §445
Meteorology *see* Hydrology, Regulation and Storage
Meters, Current, Miniature, in Unsteady Flow, New Recording System for—Gautschi and Menzi *18
Mexico, Mazatanec Commissioned ... ... §2
Miranda Power Station *273, *338
Models *see* Research
Mongolian People's Republic, Hydroelectric Resources of the ... ... †130
Motor Columbus Report ... 500
Multipurpose Projects, Standardisation in ... ... †398

N

Nepal, Hydroelectric Project in §314
New Brunswick *see* Canada
New Guinea—
Hydro Power in Papua and New Guinea ... ... §402
Papuan Power Stations ... §446
New Zealand—
Annual Report, New Zealand ... ... §358
Aviemore Scheme to Proceed *38
Aviemore Tenders ... ... §446
Benmore, £5 million saved on §358
Benmore Progress ... ... §90
Cook Strait Cable, Another? §489
Cook Strait Converter-House Contracts ... ... §136
Interconnecting New Zealand's Power Systems ... †529
Manapouri, New Zealand Government to Develop ... §135
Manapouri Started ... ... §314
Manapouri Tailrace Tunnel §181, *395
Manapouri Tunnel, Diesel Power to Build ... ... §402
Matahina Tunnels, Contract for ... ... §3
Power Scheme Programme Approved ... ... §489
Newcomen Tercentenary ... §91
Newfoundland *see* Canada
Nigeria *see* Africa
Norway—
Aluminium Plant, New Norsk Hydro ... ... §490
Ibeland Dam Lined with Plastics ... ... §489
Lindvassälv Norwegian-Swedish Power Plant ... §359
Rana and Trollheim Stations, Loan for ... ... §490
Røldal/Suldal Scheme Approved ... ... §47
USSR, Norwegian Project in †87
Nuclear Excavation ... ... †396

O

OECD Survey of Power Plant in Europe ... ... §228
Orange River *see* Africa
Overhead Lines *see* Electrical Apparatus

P

Pakistan, Mangla Crane Tenders §228
Papua *see* New Guinea
Passamaquoddy Revived ... §358
Peace River *see* Canada
Peak-Load Operation of Run-of-River Plants—Starosolszky and Laczkó *139, *192
Peak Load Symposium—Venice 432, 467, 516
Penstocks, Pipes and Pressure Shafts—
Air Vents in Closed Supply Conduits ... ... †354
Buried Steel Pipes, Designing †310
Check Surveys of Supply Systems ... ... †267
Ffestiniog Penstocks *189
Hospitalet Penstocks, France †398
Jacui, Brazil, Penstock and Distributor at *94
Mauvoisin Power Stations, Fionnay and Riddes ... *295
Penstock-Burst Detector ... †310
Plastic Penstocks ... ... §316
Resonance in Hydro-Power Systems, Theory of—Jaeger *14, *73, *118
Slide Rule for Designing Tunnels and Penstocks ... †44
Underground and Surface Penstocks at Great Lake Development, Tasmania—Colebatch, Paxton and Endersbee *320
Vianden Pressure Shaft—Ullmann 92, 230
see also Tunnels
Philippines, Maria Cristina Falls Development, Loan for ... §4
Pipes *see* Penstocks, Pipes and Pressure Shafts
Pore-Pressure Effects, Influence of, on Stress Analysis of Hydraulic Structures—Zienkiewicz *104
Porous Solid, Interstitial Pressure in a ... ... †132
Portugal—
Cávado, Progress on the ... §226
Consultants, International (COBA) 191
Electricity in Portugal in 1962 ... ... §401
Hidouro Annual Report ... §357
Miranda Power Station *273, *338
Production on the Zêzere ... 242
Power Resources, Correlation of *see* Electricity Supply Systems
Power Resources, Development of *see* Resources and Development
Power Stations—
Aschach Station, Austria, Inaugurated ... ... §489
Conowingo's Second-Stage Development—McCormack and Moyers *66
Erlenbach Power Station ... †86
Ferrara Station, Switzerland, in Full Commission ... §182
Ffestiniog Power Station *190, *250
Fionnay and Nendaz Power Stations, Grande Dixence *204
Gas Turbines versus Pumped Storage ... ... 521, †530
Inverawe Power Station, Scotland, in Service ... ... §490
Jacui Power Station, Brazil *93
Kepez Power Station, Turkey †441
Kilmorack Station Commissioned ... ... §2
Krasnoyarsk Power Station §180
Livishie Station in Service, Scotland ... ... §46
Miranda Power Station *273, *338
Peak-Load Operation of Run-of-River Plants—Starosolszky and Laczko ... *139, *192
Poatina Power Station, Tasmania—Colebatch, Paxton and Endersbee *321
Schaffhausen Power Station †44
Scharding-Neuhaus Power Station, Austria ... ... †440
Sennar Power Station Inaugurated, Sudan ... ... §4
Surface or Underground in the Snowy Mountains ... †352
Tagokura Power Station *49, *110
Taum Sauk Inaugurated ... §490
Tiszalök Power Station, Hungary ... ... †440
Trängslet Power Station, Sweden ... ... †87
Underground Openings, Ground Control Around †177
Vaccarizzo Power Station, Italy ... ... †88
Power Supply *see* Electricity Supply Systems
Pressure Shafts *see* Penstocks, Pipes and Pressure Shafts
Pressure Surges *see* Surges
Pullinque Power Station ... *27
Pumps, Pump-Turbines and Pumped Storage—
Couplings for Pumped-Storage Plants ... ... †87
Ffestiniog, Last Unit Commissioned at ... ... §180
Ffestiniog opened by the Queen ... ... §356
Ffestiniog Pumped-Storage Development ... *185, *250
Germany, Pumped-Storage Planning in—Lottes ... *21
Grande Dixence Diversion Pumping Stations *147
Hospitalet-Lanoux Pumped-Storage Scheme ... ... †267
Hudson Pumped-Storage Scheme, Alternators for ... §445
Hudson Scheme, Pump-Turbines for the ... ... §226
Modern Techniques in Storage Pumping ... ... †354
Pump-Turbine Characteristics †486
Pump-Turbines ... ... †222
Reversible Machines at Torrejon ... ... §358
Storage Pumps ... ... †88

Submersible Pump, Flygt Lightweight *85
Switzerland, Pumped Storage in ... ... †42
VDI Conference on Turbomachines ... ... §134

Q

Quebec *see* Canada

R

Radio-Isotopes Aid Spring Run-Off Forecasts from Snowfields *308
Radio-Isotopes and Water Power 313
Radio-Isotopes, Flow Gauging by means of †267, †354, 485
Rain and Rainmaking *see* Hydrology, Regulation and Storage
Rance Scheme *see* Tidal Power
Regional Inter-Ties and National Supergrids—Sewell *211, *258, *287
Regulation and Storage *see* Hydrology, Regulation and Storage
Remote Control *see* Electricity Supply Systems
Research—
Arrow Lakes Dam Model, Canada ... ... §47
BHRA Annual Report ... §271
BHRA New Laboratory ... §402
BHRA Open Day ... ... §444
British Electrical Power Convention, Water-Power Research at 347
Cavitation Tests on Scale Models ... ... †88
Civil Engineering Research Council 191
Current Meters, Miniature in Unsteady Flow, New Recording System for—Gautschi and Menzi *18
Hydraulics Research Station Open Day ... ... §357, *481
Hydraulics Research 1962—DSIR 346
IAHR Future Programme ... §444
IAHR London Congress ... §400
International Current Meter Group 249
Mathematical Model of the Mekong ... ... §90
Model Testing for Derbendi Khan Project—Blanc ... 430
Watershed Models, Designing Dams with the Help of ... †442
see also Conferences
Reservoirs *see* Dams *and* Hydrology, Regulation and Storage
Resonance in Hydro-Power Systems, Theory of—Jaeger *14, *73, *118
Resources, Development of—
Athabasca River Studies, Canada ... ... §46
Brazilian Hydroelectric Survey §90
Czechoslovak Electricity Supply Industry ... ... †177
Fallible Prophets, The ... 179
Hungary and Yugoslavia Power Cooperation ... §228
Jaen Plan, Spain 80
Mongolian People's Republic, Hydroelectric Resources of the ... ... †130
New Zealand Power Scheme Programme Approved ... §489
Regional Inter-Ties and National Supergrids—Sewell *211, *258, *287
Resource Integration and the TVA 269
Seven-Country Power Link-up in Eastern Europe ... §48
Spain's Hydraulic Economy †86
Water Resources Symposium, Australian ... ... §445
see also Electricity Supply Systems *and* Tidal Power
Rheidol Scheme *491
Rhodesia and Nyasaland *see* Africa
Rockbolting ... ... †87
Rock Mechanics—
Colloquium on In-Situ Rock Tests, Swansea *155
Dam Foundation Rocks, Testing ... ... †132
International Society of Rock Mechanics, Salzburg Colloquium ... ... §180, 501
State of Stress in the Earth's Crust, Santa Monica Conference—Veltrop 369, 446
Stress Analysis Conference, Swansea ... ... §489
Underground Openings, Ground Control Around ... †177
Rumania, Iron Gates Scheme to Proceed ... ... §314
Run-of-River Plants, Peak-Load Operation of—Starosolszky and Laczkó *139, *192
Russia—
Borland Fish Pass for Russia §445
Bratsk 230MW Turbines ... *324
Construction in the USSR ... †131
Developments in Russia §402, §489
Katun River Diversion Proposed, Siberia ... ... §3
Kiev Development 310
Krasnoyarsk, Progress at ... †311
Krasnoyarsk Turbines ... †396
Lena, Chain of Stations on §445
Norwegian Project in USSR †87
Tuloma River Scheme ... †175
Yenisyei Dammed at Krasnoyarsk ... ... §180

S

Salzburg Colloquium 501
Saskatchewan *see* Canada
Scotland
Cruachan, Tunnelling at ... *172
Cruachan 275kV Oil-Filled Cables ... ... §315
Fada-Fionn and Loch a'Bhraoin Schemes Published 184
Highland Fund opposes Scottish Boards Merger ... §134
Inverawe Station in Service §490
Kilmorack Station Commissioned ... ... §2
Livishie Station in Service ... §46
Mackenzie Report (Corresp.)—Venters 359
Orrin Dam, Ross-shire ... 286
Scottish Boards to Remain ... 368
Scottish Controversy ... §270
Scottish Hydro Board's Report 133
Strathfarrar and Kilmorack, Royal Inauguration of ... §270
Tunnelling at Inverawe ... *348
Value of Scottish Water Power ... ... §134
Value of Water Power in a Mixed System—Chapman *165
Screens *see* Intakes
Seyhan Project, Power Credit for ... ... §135
Shafts, Pressure *see* Penstocks, Pipes and Pressure Shafts
Shovels *see* Construction Equipment
Silting in Reservoirs ... ... †130
Snowy Mountains Scheme *see* Australia
Société Hydrotechnique de France *see* Conferences
Soil Mechanics—
Electrical Discharges Used to Consolidate Sandy Ground †440
Grouting 443
South Saskatchewan River Project—Mackintosh ... *361, *403
Spain—
Aldeadávila Turbines Commissioned ... ... §91
Belesar, BICC Busbars for 174
Belesar Power Station Opened §446
British Contract for Fenosa Stations ... ... §90
Consultants, Hydroelectric, Spanish 474
Duero and Lower Ebro Schemes ... ... †175
Gran Suarna Scheme ... §445
Hydraulic Economy, Spain's †86
Jaen Plan 80
Reversible Machines at Torrejon ... ... §358
Turbines for Lower Mino Project ... ... §180
Spillways *see* Channels, Dams *and* Hydraulics
Storage *see* Dams *and* Hydrology, Regulation and Storage
Stress Analysis of Hydraulic Structures Including Pore-Pressure Effects—Zienkiewicz *104
Submarine Cables *see* Electrical Apparatus
Submarine, Perspex Inspection
Sudan *see* Africa
Supervisory Control *see* Electricity Supply Systems
Surges—
Overpressures and Overspeeds in Generating Sets ... †87
Resonance in Hydro-Power Systems, Theory of—Jaeger *14, *73, *118
Run-of-River Plants, Surge Control in ... ... †222
Surveying, Airborne Profile Recorder, Hunting *173
Swaziland *see* Africa
Sweden—
Airborne Power Line Inspection ... ... §226
Ghambal River Tunnel, India, Swedish Contractors for ... §315
Kattegatt Submarine Power Cable ... ... §227
Laxede Turbines in Service §181
Lindvassälv Norwegian-Swedish Power Plant ... §359
Long-Term Power Forecast, Swedish 54
Swedish Power in 1961/2 ... §314
Three Lule Stations Inaugurated 474
Trängslet Power Station ... †87
Yugoslavia, Swedish Turbines for ... ... §446
Switchgear *see* Electrical Apparatus
Switzerland—
Aare River Development ... †441
Brazil, Swiss Turbines for ... §400
Compensation Set, Gösgen ... †442
Dranse-Drône Development †176
Eggen and Alpen Supply Tunnels ... ... †130
Engadine Project ... ... †311
Erlenbach Power Station ... †86
Ferrera Station in Full Commission ... ... §182
Grande Dixence ... *145, *201
Mauvoisin †175, *231, *295
Pumped Storage in Switzerland ... ... †42
Schaffhausen Power Station †44
Schiffenen Project ... ... †43
Syria, Euphrates Dam ... ... §135

T

Tagokura Power Station *49, *110
Tasmania *see* Australia
Thailand, Yanhee Transmission Line, Loan for ... ... §227
Thermal Power *see* Electricity Supply Systems
Thrust Bearings, Operating Conditions of ... ... †441

Thrust Bearings, Standardised, Glacier *38
Tidal Power—
Passamaquoddy Revived ... §358
Rance, Construction Progress on the ... ... †441
Rance Sluice Gates ... ... §315
Western Australia, Tidal Power in ... ... §3
Tiszalök Power Station, Hungary ... ... †440
Tractors *see* Construction Equipment
Transformers *see* Electrical Apparatus
Transmission *see* Electrical Apparatus
Trashracks *see* Intakes
Trucks *see* Construction Equipment
Tunnels—
Buckling Resistance of Steel Liners for Circular Pressure Tunnels — Vaughan (Corresp.) *5
Check Surveys of Supply Systems ... ... †267
Concrete-Lined Supply Tunnels, Imperviousness in ... †175
Cruachan, Tunnelling at ... *172
Eggen and Alpjen Supply Tunnels ... ... †130
Ffestiniog Pressure Shafts and Tunnels *187
Fionnay and Nendaz Supply Tunnels, Grande Dixence *203
Gsall Gravity Tunnel, Austria †529
Hardrock Tunnelling Practice, New ... ... †468
Inverawe, Tunnelling at ... *348
Kemano Tunnel, Canada, Repairing the ... ... †42
Manapouri Tailrace Tunnel, New Zealand ... §186, *395
Manapouri Tunnel, New Zealand, Diesel Power to Build ... ... §402
Matahina Tunnels, New Zealand, Contract for ... ... §3
Mauvoisin Tunnels ... 236, 298
Miranda Diversion Tunnel ... *280
Mole used at South Saskatchewan—Mackintosh ... *361
Mole used for Tunnelling at Great Lake Power Development — Colebatch, Paxton and Endersbee ... *317
Portage Mountain Diversion Tunnels, Peace River ... §4
Resonance in Hydro-Power Systems, Theory of—Jaeger *14, *73, *118
Roselend Power Tunnel, Testing the Imperviousness of ... ... †267
Slide Rule for Designing Tunnels and Penstocks ... †44
Swedish Contractors for Ghambal River Tunnel, India ... ... §315
Underground Openings, Ground Control Around ... †177
Water Inrush in a Supply Tunnel ... ... †311
Waterproof Liners for Pressure Tunnels ... ... †528
World Tunnelling Record Claimed at Poatina, Tasmania ... ... §182
see also Penstocks, Pipes and Pressure Shafts
Turbines—
Advances in Water-Turbine Engineering ... ... †529
Aldeadávila Turbines Commissioned ... ... §91
Boundary Station, Seattle, Turbines for ... ... §357
Bratsk 230MW Turbines ... *324
British Turbine Test Standard
British Turbines Overseas ... §135
Bulb Turbines, 20MW, Pierre Bénite Development ... §489
Compensation Set, Gösgen, Switzerland ... ... †442
Conowingo's Second-Stage Development — McCormack and Moyers *66
Current Meters, Miniature, in Unsteady Flow, New Recording System for—Gautschi and Menzi ... *18
"Diagonal" Turbine, NOHAB *438
Difficulties, Operation, Hydraulic Turbine—Parmakian *418
Dinas Turbine, Rheidol Scheme, Wales *499
Ejector Effect, Flood-Sluice, Increased Output from ... †353
Electric Actuator, Neyrpic §359
France, Record Pelton Turbines for ... ... §270
German Turbines for Colombia ... ... §182
Governing, Frequency-Output, at the Gougra Plants †223
Governing Systems, Turbine Tests on—Hutarew *157, *196, *243
Governor, ASEA Electro-hydraulic *84
IEC Hydraulic Turbine Committee 383
Intake Performance, Turbine, Measuring ... ... †130
Jacui Power Station, Brazil, Turbines at *96
Kaplan Turbines, Limiting Runaway Speeds of ... †132
Krasnoyarsk Turbines ... †396
Laxede Turbines in Service §181
Miranda Turbines, Portugal *338
Multipurpose Machining Unit for Large Turbine Components ... ... †529
Overpressures and Overspeeds in Generating Sets †87
Peltons, World's Most Powerful, for Moncenisio ... §47
Sabine River Turbines ... §4
Sennar Power Station Turbines, Sudan ... ... §4
Snowy Mountains, Murray 1, Remaining Sets Ordered ... §490
Spain, Lower Mino Project, Turbines for ... ... §180
Spark - Machining Pelton Runners ... ... †528
Special Duties, Turbines for §182
Swedish Turbines for Yugoslavia ... ... §446
Swiss Turbines for Brazilian Stations ... ... §400
Tagokura Turbines *110
Tasmania, Lower Derwent, Turbines for ... ... §226
Thermodynamic Method of Measuring Turbine Efficiency ... ... †397
Tubular Turbines ... ... †221
Uganda, Maziba Gorge Station, River Nyakizumba, Generating Set for ... §358
VDI Conference on Turbomachines ... ... §134
Welded Turbine Shafts, US Bureau of Reclamation Admit ... ... §47
Wells Dam, Columbia River, Turbines for ... ... §316
see also Pumps, Pump Turbines and Pumped-Storage
Turkey, Kepez Power Station †441
Turkey, Power Credit for (Seyhan project) ... ... §135
Twin Falls Scheme, Labrador *8

U

United States of America—
Abiquiu Dam, Wheel Excavator at—Mackintosh ... *510
American Incident, An ... 89
American Iron and Steel Institute Award ... ... §183
Big Bend Dam, Construction Progress at ... ... †397
Boundary Station, Seattle, Turbines for ... ... §357
Conowingo's Second - Stage Development — McCormack and Moyers *66
Cougar Dam, Progress at ... †266
Cross Rock Scheme, Maine §181
Cupola Dams in North America, First ... ... †486
Hamilton Falls, US Interest in ... ... §227
Hudson Pumped - Storage Scheme, Alternators for ... §445
Hudson Scheme, Pump-Turbines for ... ... §226
Marble Canyon versus Kanab Creek ... ... †223
Middle Fork American River Contract ... ... §228
Passamaquoddy Revived ... §358
Reclamation in USA ... †221
Sabine River Turbines ... §4
Taum Sauk Inaugurated ... §490
Transmission Line, EHV DC, USA to test ... ... †88
TVA gives in at Hales Bar
Welded Turbine Shafts, US Bureau of Reclamation Admit ... ... §47
Wells Dam, Columbia River, Turbines for ... ... §316
Yuba-Bear Development ... †131
USSR *see* Russia
Uganda *see* Africa
Underground Openings, Ground Control Around ... ... †177
Unit-Slope Chart Applied to Manning's Equation—Jones *457

V

Vaiont Disaster *see* Italy
Value of Water Power in a Mixed System—Chapman ... *165
Valves *see* Gates and Valves
Venezuela, Guri Project, Loan for, ... §488
Victoria *see* Australia
Voler Compound for Drill Threads 526
Volta River *see* Africa

W

Wales—
Ffestiniog, Last Unit Commissioned at ... ... §180
Ffestiniog opened by the Queen ... ... §356
Ffestiniog Pumped-Storage Development ... *185, *250
Rheidol Scheme *491
Water and Other Power Resources, Correlation of, *see* Electricity Supply Systems
Water-Power Resources *see* Electricity Supply Systems *and* Resources and Development
Water Turbines *see* Turbines
Water Weed, Kariba, Air Offensive Against ... ... §91
Weather Control *see* Hydrology, Regulation and Storage
Welding—
Diesel-Powered Welding Set, Welding Industries Limited *40
Electrode Alloys, Hardfacing 309
Wheel Excavator at Abiquiu Dam—Mackintosh *510
World Bank—
Annual Report, World Bank §4
Colombia, Cauca Valley Power Loan ... ... §271
Costa Rica Power Loan ... §402
El Salvador, Power Loan for §357
Electrification Study for Ecuador ... ... §316

Guri Project, Venezuela, Loan for ... ... §488
Maria Cristina Falls Development, Loan for ... §4
Rana and Trollheim Stations, Norway, Loan for ... §490
Swaziland, Loan for Edwaleni Scheme ... ... §314
Thailand, Yanhee Transmission Line, Loan for ... §227
Turkey, Power Credit for, (Seyhan Project) ... ... §135
World Power Conference *see* Conferences
Wrench, Impact, Reversible Torque-Control, C.P. ... *439

Y

Yugoslavia—
Hungary and Yugoslavia Power Cooperation ... §228
Iron Gates Scheme to Proceed ... ... §314
Obravac Power Station ... †176
Swedish Turbines for Yugoslavia ... ... §446

Editorials

American Incident, An ... 89
British Turbine Test Standard 1
Conservatism and Computers 45
Fallible Prophets, The 179
Getting the Power Away ... 399
Grouting 443
Last Hurdle on the Columbia? 355
Radio-Isotopes and Water Power 313
Resource Integration and the TVA 269
Scottish Hydro Board's Report 133
Superelevation 225
Vaiont Disaster, The 487

Book Reviews

Angewandte Hydraulik II—Hydraulik Maschinen—Ribaux 216
Annuaire Hydrologique de la France, 1959 125
Application de la Géologie aux Travaux de l'Ingenieur—Goguel 126
Atlas of Australian Resources, Second Series: Electricity ... 483
Basic Statistics of Energy, 1950-1961—OECD 217
Case Study of the Comprehensive Development of the Kitakami River Basin 248
Collection of Papers on Underground Pipeline Corrosion—Vols. VI-VII—McComb ... 351
Contract Journal Directory and Year Book, 1963 351
Critical-Depth Flumes for Flow Measurement in Open Channels—Ackers and Harrison ... 484
Dictionnaire pour les Travaux Publics, le Batiment et l'Équipement des Chantiers de Construction—Bucksch ... 218
Die Talsperren Österreichs—Grengg 41
Drei Generationen Bauingenieure—Mommsen ... 126
Druckwasserschlosser von Wasserkraftanlagen—Stucky ... 350
Economic and Social Aspects of Lower Mekong Development 483
Economic Development of Spain—World Bank 218
Electricity Supply Maps for Africa—Vogt 351
Elsevier's Dictionary of Building Construction—Van Mansum 41
Ennskette 125
Evolution and Engineering—Hutton 125
Federation of Civil Engineering Contractors Handbook, 1962–63 126
Floods and Flood Control—TVA Report No. 26 351
Flow Measurement in Closed Conduits—The Proceedings of a Symposium held at the National Engineering Laboratory 41
Fremont Canyon Power Plant and Power Conduit 527
Geology and Engineering—Legget 216
Handbuch der Energiewirtschaft—Witte 218
Hole in my Bucket, A—Twort 484
Hydraulics—Rao 216
Ingenieurgeologie—Záruba and Mencl 41
International River Basin (UN Seminar Proceedings) ... 527
Journal of Hydrology 283
Kempe's Engineers Year-Book, 1963—Prockter 216
Million Horses; Tasmania's Power in the Mountains—Garvie 350
Multiple-Purpose River Basin Developments, Part 20, Water Resources Development in Afghanistan, Iran, Republic of Korea, and Nepal ... 41
Potential Flow Through Spiral Casings—Athanassiadis ... 216
Praktische Geologie, Gesteins- und Grundwasserkunde für Bauingenieure—Lehmann ... 217
Praktische Hinweise für den Baumaschinen-Einsatz: Staudämme in Hochgeberge—Kunn 126
Proceedings of the Fourth Regional Technical Conference on Water Resources Development in Asia and the Far East—United Nations ... 217
River Basin Development ... 484
Scritti di Carlo Semenza ... 41
Selected Aspects of Hydraulic Engineering 484
Seven-Language Dictionary of Terms Used in Concrete Technology 126
Survey of Surge-Tank Design Theories: NEL Report No. 56—Pearsall 125
Tables for the Hydraulic Design of Storm Drains, Sewers and Pipelines—Ackers 484
Technical Dictionary on Dams 351
Tidal Power in the Light of Contemporary Power—Bernstein 217
Vibration Analysis and Design of Foundations for Machines and Turbines—Major ... 217
Wasserbau—Samarin, Popoff and Fandeyev 125
Waterhammer Analysis—Parmakian 527
Wörterbuch für Ingenieurbau und Baumaschinen—Bucksch 218

Correspondence

Buckling Resistance of Steel Liners for Circular Pressure Tunnels—Vaughan *5
Comparative Flow-Measurement Tests at Finlarig Power Station—Robinson 92
Hutton & Murdoch 136
Critical-Flow Computations in Trapezoidal Channels—Advani 48
Friction Loss in Steep Channels—Rajaratnam 7
Largest Steel-Plate Spiral Casings in the World—NOHAB *136
Mackenzie Report—Venters ... 359
Malpasset Report—
Cambefort 137
Jaeger 138
Puls 228
Method of Hydraulic Equivalents for Critical-Flow Computations—Advani *183
Vianden Pressure Shaft—Ullmann 92, 230

Authors and Correspondents

Advani, R. M., M.I.E.(Ind.), M.ASCE ... 48, *183, *503
Blanc, G. J. *423, *447
Bleuler, W. *460
Cambefort, Prof. Henri ... 137
Chapman, E. J. K. *165
Colebatch, G. T. *317
Diskin, N. H., B.E., M.Sc., A.M.I.E.(Aust.) *333
Endersbee, L. A. *317
Gautschi, G., Dipl.Ing. E.T.H./S.I.A. *18
Hutarew, Prof. Dr. Ing. Georg *157, *196, *243
Hutton, Prof. S. P., M.Eng., Ph.D., D.Eng., M.I.Mech.E., A.M.I.C.E., A.F.R.Ae.S. ... 136
Jaeger, Dr. Charles *14, *55, *73, *118, 138
Jones, Prof. L. E., B.Sc.(C.E.), M.A.Sc., Ph.D., P.Eng., M.E.I.C. *284, *457
Laczkó, Miss A. ... *139, *192
Lottes, Gerd, Dr. Ing. *21
Low, Edward J., BS in CE., PE (California) *109
Mackintosh, Ian B., M.A., A.M.I.C.E., M.ASCE *361, *403, *510
McCormack, Webster J., M.ASME *66
Menzi, H., Dipl.El.Ing., E.T.H. *18
Moyers, Stanley, M.ASME ... *66
Murdoch, G. B. 136
NOHAB *136
Parmakian, John, M.ASME ... *418
Paxton, H. L. *317
Puls, Louis G. 228
Rajaratnam, N., Ph.D. ... 7, *79
Richey, Dr. J. E., F.R.S., F.S.E. *237, *303, *326, *374, *409, *475, *505
Robinson, W. J. 92
Sato, T. *385
Seetharamaiah, K., B.E., F.ASCE 392
Sewell, W. R. Derrick, M.A., B.Sc. *211, *258, *287
Silvester, R., B.A., B.E., Ph.D.(W.A.), A.M.I.C.E., A.M.I.E.Aust. 100
Starosolszky, Ö. *139, *192
Ullmann, F. 92, 230
Vaughan, E. W. *5
Veltrop, Dr. J. A. 369
Venters, John, B.Sc., M.I.C.E., M.I.Mech.E., M.I.E.E., Barrister-at-Law 359
Zienkiewicz, O. C., B.Sc., Ph.D., D.I.C., A.C.G.I., M.I.C.E., F.ASCE. *104

For the convenience of those who do not bind back copies, the following table shows the numbers of the pages contained in each issue of WATER POWER for 1963:

January	1- 44	July	269-312
February	45- 88	August	313-354
March	89-132	September ...	355-398
April	133-177	October	399-442
May	179-223	November ...	443-486
June	225-268	December	487-530